TB TIMES

County of Los Angeles Department of Health Services Public Health

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Shirley Fannin, MD
Director, Disease Control Programs

Paul Davidson, MD
Director, Tuberculosis Control

A Note From Dr. Davidson

I will be retiring from County service October 1, 2001 after completing 18 years as Director of Tuberculosis Control. These have been eventful years full of twists and turns in the circumstances related to the control of tuberculosis as well as the many changes in the Department of Health Services and Public Health. I believe I can honestly say that I will leave the control of tuberculosis in a more favorable condition for the County then when I arrived. I regret to say that there is still a long way to go before this disease can be eliminated in Los Angeles. However, at the current level of disease, the possibility of elimination is at least in sight. I presented the following information and comments at a recent meeting of the Public Health Commission and would like to share them with readers of TB Times:

I would like to summarize some of the important trends in the incidence of tuberculosis in Los Angeles County and some of the outcome accomplishments related to program objectives. I will conclude by making a few general reflections as I begin to fade out of the picture.

During the year 2000 the number of cases of reported tuberculosis declined for the eighth year in a row at 1065. This is a 9% decline from the number in 1999 and outpaced both the State of California and the United States that have also had eight years of declining incidence. The incidence of tuberculosis is at a historical low for all these jurisdictions (Table 1). Figure 1 illustrates the trends in case numbers and incidence rates for the past 16 years.

There has also been a decline in the number of cases in all races and ethnic groups during the past eight years (Fig. 2). Persons of Asian and Black races continue to be over-represented and whites under-represented as compared to the overall population. Hispanics are equally represented (Fig. 3).

The number of cases by age group has declined most dramatically in the 15 to 34 age group during the past 8 years. However, there has been a leveling in the number of cases in this age group during the past 4 years. The 65 and older age group has remained level for many

Table 1. Reported Tuberculosis Cases, 2000

	LA County	California	United States
Cases	1,065	3,295	16,372
Percent change since 1999	-9.0%	-8.7%	-6.6%

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TB TIMES To Quit in June

After twelve years of monthly publication of the *TB Times*, the June issue will be the last issue. Dr. Jonathan Fielding, Director of Public and the Public Health Communications staff have decided to consolidate a number of Public Health's current newsletters with a plan to create two new external publications that will incorporate information from the programs that currently publish their own newsletters. The new publications will be distributed to the same audiences now receiving existing publications. One of the new publications will be for physicians and the other for community professionals and stakeholders. The physician-aimed publication will be published 10 to12 times a year and the community-geared publication will be published quarterly. The physician publication will be distributed to about 40,000 physicians and health care professionals in Los Angeles County and the State. Selected organizations (CDC, other state health departments, etc.) also will receive a copy. The publication will also replace the existing *Public Health Letter*, published since 1979.

Since space will be limited in this new publication, certain features now included in the *TB Times* that are of specific interest to those who specialize in issues related to tuberculosis will no longer be included. TB Control has long

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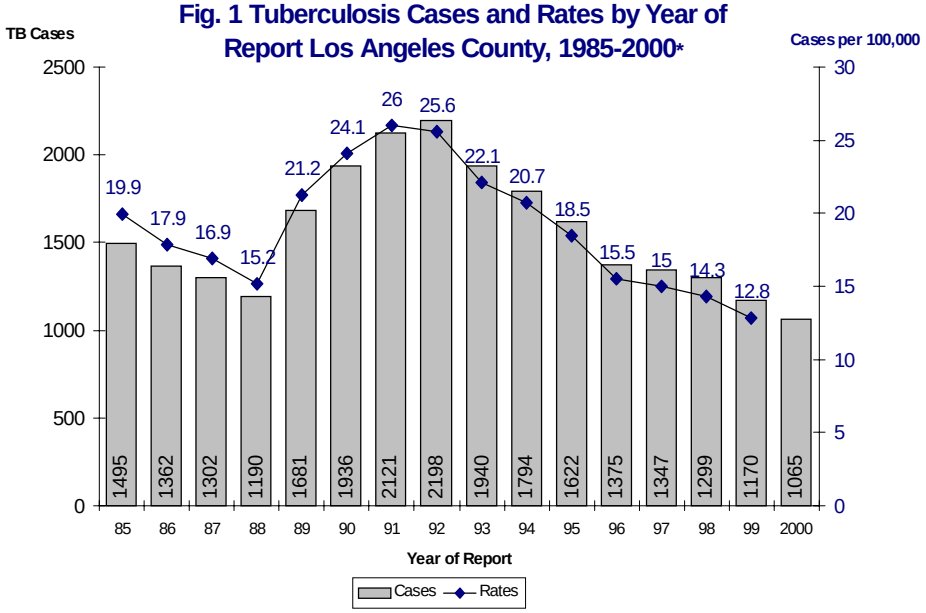
Fig. 1 Tuberculosis Cases and Rates by Year of Report Los Angeles County, 1985-2000*



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years and contributes the second largest number of cases (Fig. 4). As tuberculosis is controlled and gradually eliminated, the 65 and older age group will become the predominate group in terms of cases and incidence. The corollary to this is that the number of cases in the 0-14 age group should be the first age group to approach 0 if tuberculosis is fully under control and moving toward elimination.

The number of cases of tuberculosis in both the foreign-born and the US born has declined during the past eight years (Fig. 5). However, the percentage of cases that are foreign-born has been steadily increasing from 62.6% in 1990 to 72.7% in 2000 (Fig. 6). Since tuberculosis continues to be out of control in many parts of the world, the foreign-born may be the Achilles heel that will make elimination of tuberculosis in Los Angeles County very difficult.

The cases in persons infected with HIV and the homeless have reached an all-time low in 2000

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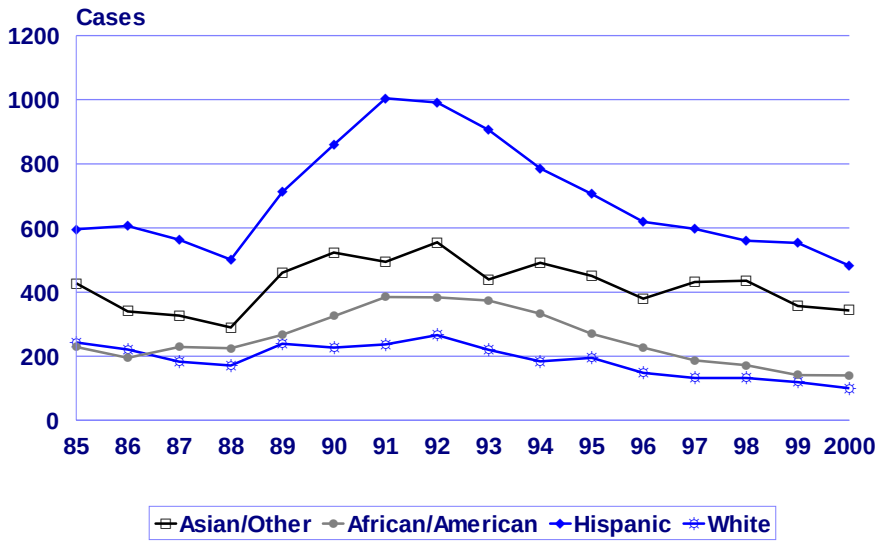
Fig. 2 Annual Tuberculosis Cases by Race/Ethnicity Los Angeles County, 1985-2000



Upcoming Conferences

June 1, 2001
9:00 a.m. - 10:30 a.m.
Orthopaedic Hospital
Andrew Norman Hall
Case Presentation
from Curtis Tucker Health Center
"Oh What a Tangled Web We Weave"
Meri Rathbun, M.D. and Staff

June 1, 2001
10:30 a.m. – 12:00 p.m.
Orthopaedic Hospital
Andrew Norman Hall
Physician Case Presentations
Vincent Hsu, M.D.
Assistant Medical Director

June 12, 2001
8:00 a.m. – 4:30 p.m.
TB Control Program Headquarters, Room 506A
Nursing Intensive – "TB 101"
(Pre-registration is required – Please phone (213) 744-6229 for information)

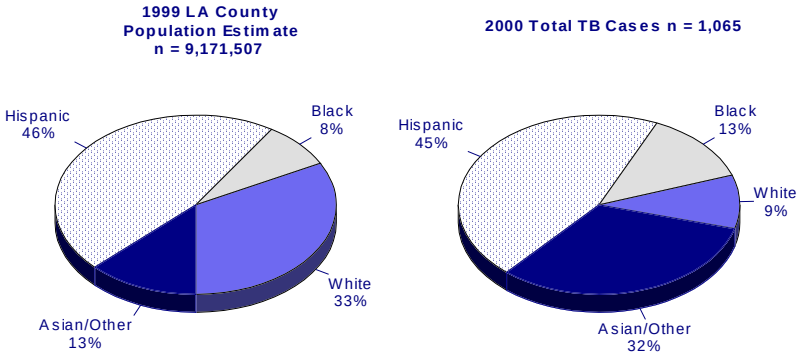
June 15, 2001
9:00 a.m. – 11:30 a.m.
TB Control Program Headquarters, Room 506A
Physician Case Presentation and Journal Review
Annette Nitta, M.D. and
Delia Cabansag, M.D.

June 20, 2001
8:00 a.m. – 12:00 p.m.
TB Control Program Headquarters, Room 506A
Community Health Worker Half Day Inservice
Robert Miodovski, M.P.H.
Senior Health Educator

Coming Up Next Month . . . . .

July 6, 2001
9:00 a.m. -10:30 a.m.
Orthopaedic Hospital - Andrew Norman Hall
Case Presentation
from Whittier Health Center
"Outbreak of Tuberculosis in a Dialysis Center"
Maxine Liggins, M.D. and Staff

Fig. 3 County Population and Tuberculosis Cases by Race/Ethnicity Los Angeles County, 2000



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with 77 and 76 cases respectively (Figs. 7 and 8). A decline in the control of the spread of HIV or a serious downturn in the economy could adversely affect tuberculosis in these populations. The same would hold true with persons that have multiple co-factors such as being foreign-born, homeless and HIV infected.

Considerable effort is being placed on setting objectives and measuring outcomes for all public health programs. Tuberculosis Control in collaboration with the State and CDC has been evaluating program effectiveness and documenting outcomes related to tuberculosis for many years. Our ability to participate in this process has been dramatically increasing with the availability of computerized data systems and the strengthening of the data management and epidemiology staff at Tuberculosis Control and in the Health Centers. Four examples of objectives and outcome measurements are illustrated. Directly observed therapy (DOT) is a highly effective program activity that assures that patients receive their medications. The number of tuberculosis patients receiving DOT has steadily increased since 1995 (Fig. 9). Our objective is to reach 100% of all cases being managed with DOT.

The CDC National objective regarding what percentage of patients with tuberculosis disease complete a prescribed course of therapy within 12 months is 85%. In 2000, Los Angeles County performed at the 65% level. As figure 10 shows, there are a number of factors that inhibit reaching this objective such as patients dying, moving, or taking longer to complete therapy. We have very little ability to control some of these factors.

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Fig. 4 Annual Tuberculosis Cases by Age Los Angeles County, 1985-2000

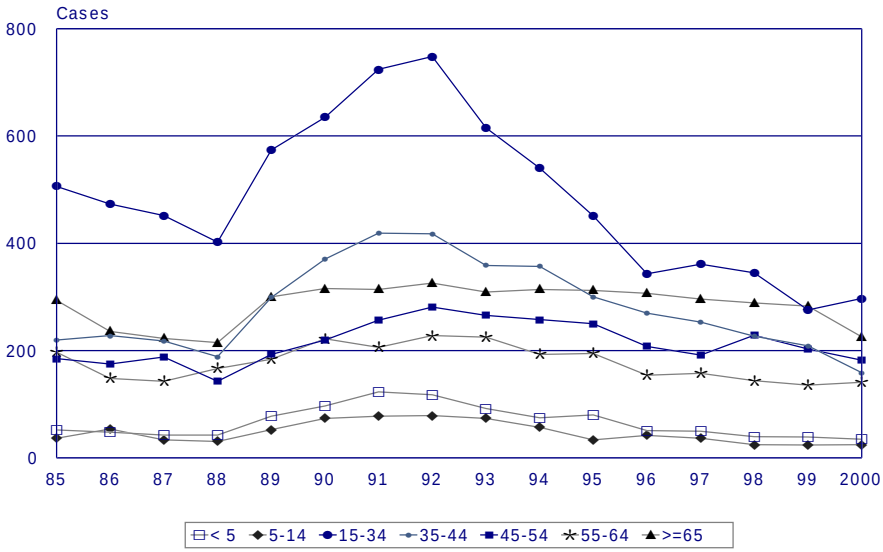
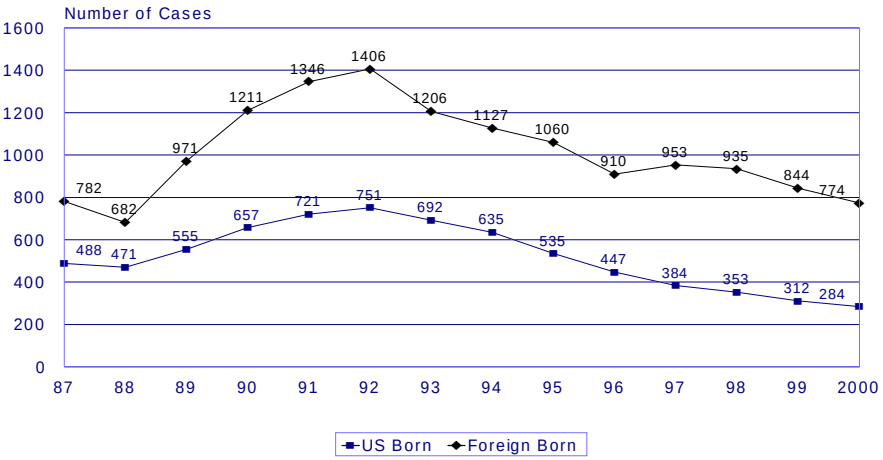


Fig. 5 US and Foreign Born TB Cases by Year of Report Los Angeles County, 1987-2000



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Overall a very high percentage of patients started on treatment in Los Angeles County eventually complete treatment if they do not die within the first 12 months. A very small percentage of patients (1.9%) are lost to follow-up.

Los Angeles County has exceeded the National Objective of 92% in drug susceptibility testing for a number of years with 98.5% in 2000. This is a reflection on the excellent Public Health Laboratory support we have in Los Angeles County.

Fig. 6 US and Foreign Born TB Cases by Year of Report
Los Angeles County, 1987-2000

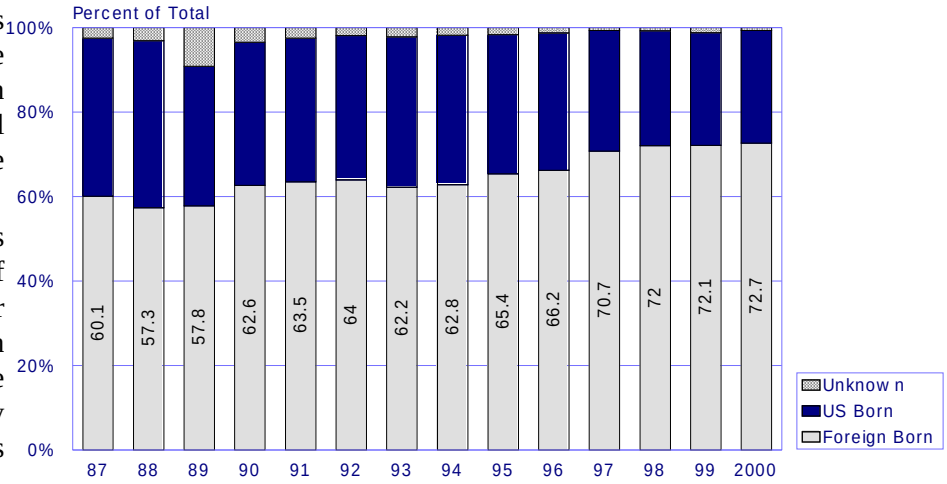


Fig. 7 HIV Infection Among TB Cases by Year of Report
Los Angeles County, 1989-2000

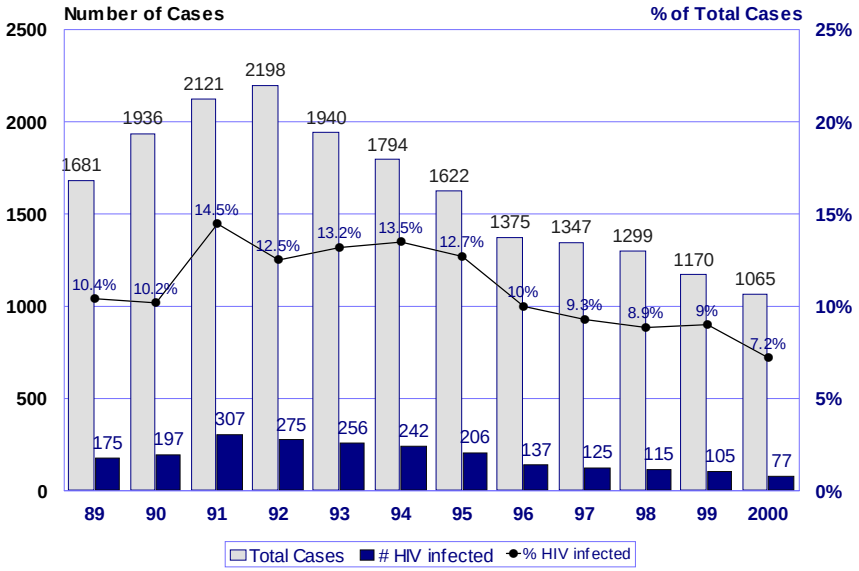
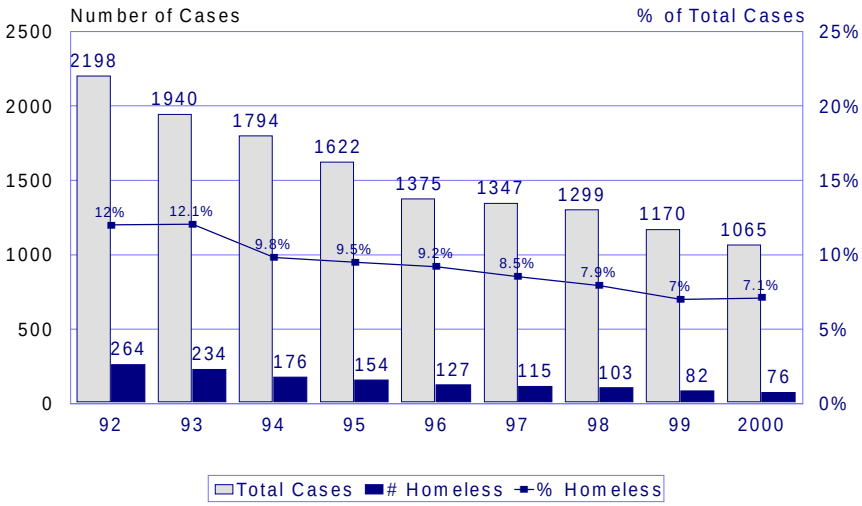


Fig. 8 Homeless TB Cases by Year of Report
Los Angeles County, 1992-2000



New guidelines concerning preventive therapy were published by CDC/ATS this past year. The Tuberculosis Control Program for Los Angeles County recently approved and circulated the standards expected for Los Angeles County. These standards are based on the CDC/ATS and the State of California guidelines. Among the changes has been the terminology. Treatment of latent tuberculosis infection (LTBI) is now preferred to that of preventive therapy. One of the highest priorities for treatment of LTBI is for contacts of contagious cases of tuberculosis. The National objective for treating contacts is that 85% should complete treatment of LTBI (Fig. 11). As you will note the 1999 cohort of contacts in Los Angeles County only completed therapy in 47.3%. The National objective for completing treatment of LTBI in other groups that are targeted because of increased risk is 75%. The results of completing treatment by the CBOs that had contracts with the County were 52.8%, significantly below the set objective. Testing those at high risk for tuberculosis infection and successfully treating those with

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LTBI will need to be a higher priority for the Tuberculosis Control Program in coming years as we move toward elimination of this disease.

In conclusion, a great deal of work must be done before we can declare victory over tuberculosis. I believe the following are some of the more important aspects for Los Angeles Public Health to address in coming years to assure the decline and eventual elimination of this disease:

1. Every effort must be made to maintain the necessary infrastructure to get the job of eliminating tuberculosis done. This includes maintaining level and in some cases increased funding despite decreasing numbers of cases.

2. The treatment of tuberculosis is a specialty. It will be necessary to maintain specialty clinics staffed by appropriately trained and experienced physicians, nurses and support personnel.

3. The availability of DOT is essential to the eventual elimination of tuberculosis. This includes availability to patients cared for by both the private and public sectors.

Fig. 9 DOT TB Cases by Year of Report Los Angeles County, 1993-2000

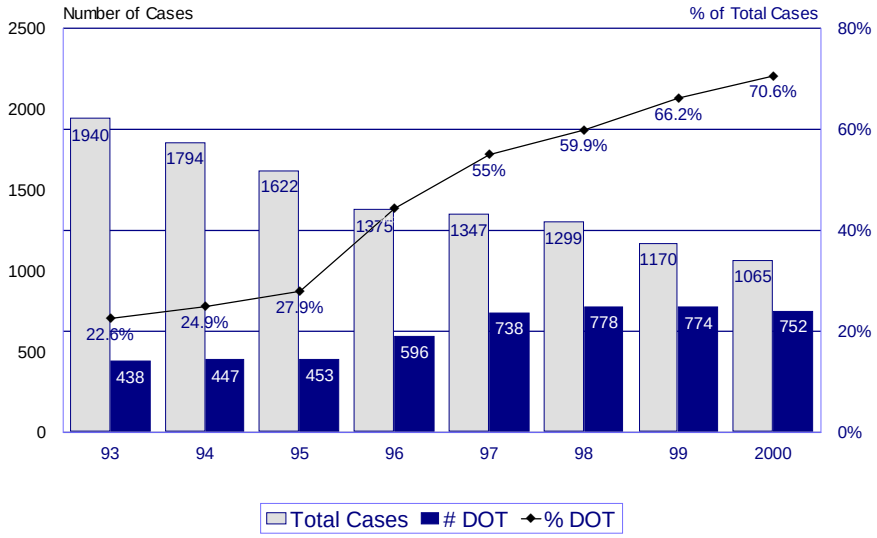
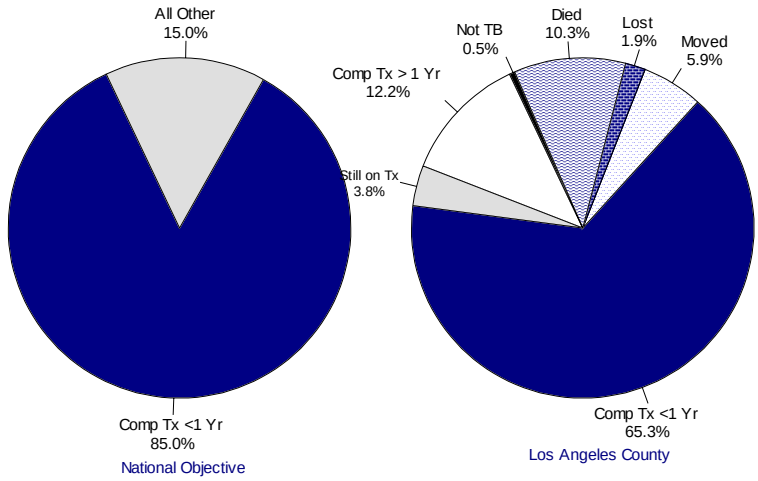


Fig. 10 National Objectives for Treatment Outcomes and Los Angeles County TB Cases, 1999 (N=1,170)



4. Efforts should continue to establish tuberculosis specialty clinics in strategically located full-service outpatient facilities.

5. As tuberculosis declines it will be increasingly found in limited sub-segments of the population many of whom will be difficult to reach and serve. New programs will be necessary to successfully eliminate tuberculosis in these populations. Examples of such populations include the elderly, the homeless and those living in poverty, the undocumented foreign-born, and the mentally ill.

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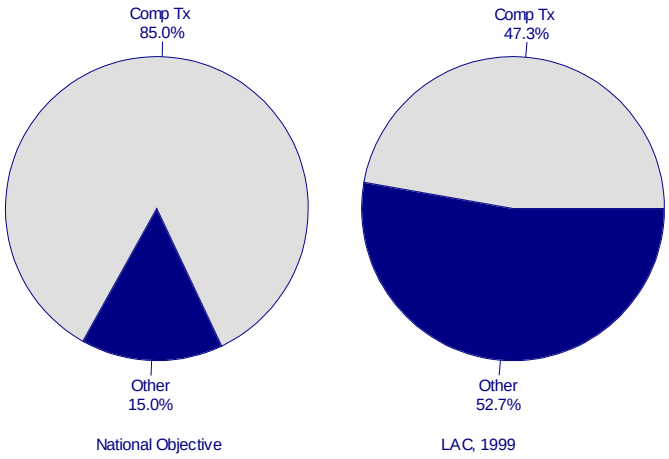
Fig. 11 National Objective for Treatment of LTBI: Contacts to Infectious Cases Los Angeles County 1999 (N=1,071)



WORLD TB UPDATE

A summary of selected TB news and journal articles compiled from the CDC HIV/STD/TB

A Whole Blood Bactericidal Assay for Tuberculosis [R.S. Wallis, M. Palaci, S. Vinhas, et al., *Journal of Infectious Diseases* 2001;183(8)]: Investigators report the bactericidal activity of orally administered antituberculosis (anti-TB) drugs was determined in a whole blood culture model of intracellular infection in which microbial killing reflects the combined effects of drug and immune mechanisms. They relate that rifampin (Rif) was the most active compound studied and reduced the number of viable bacilli by >4 logs; isoniazid (INH), 2 quinolones, and pyrazinamide (PZA) showed intermediate levels of activity; ethambutol exerted only a bacteristatic effect; amoxicillin/clavulanate was inactive. They noted the combination of INH-Rif-PZA showed strong activity against 11 drug-sensitive isolates (mean, -3.8 log) but no activity against 12 multidrug-resistant (MDR) strains while the combination of levofloxacin-PZA-ethambutol had intermediate bactericidal activity against MDR isolates (mean, -1.2 log) but failed to equal that of INH-Rif-PZA against sensitive isolates ($P < .001$). They comment that the whole blood BACTEC method (Becton Dickinson) may be useful for the early clinical evaluation of new anti-TB drugs and in the management of individual patients.

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6. Maintenance of incentives and enablers will remain an essential part of eliminating tuberculosis. New and innovative approaches will be necessary. Flexibility will be essential.

7. A highly skilled field services will be necessary to find cases as early as possible and test and find those at risk for developing disease. Supervision of treatment with DOT and other enablers is critical. Innovation is also necessary here. The roll of Community Workers and other non-licensed persons should be expanded into testing, case finding and providing treatment services for cases and those on treatment of LTBI.

8. Above all, the first priority is to prevent the transmission of tuberculosis. Only then will there be an emerging succession of generations free of infection, without risk of developing disease, and vigorously marching toward the elimination of this amazingly persistent disease.

—Paul T. Davidson, M.D.

Editor's Note: The data presented in this article for Los Angeles County excludes Pasadena and Long Beach. These cities maintain independent health departments and reporting systems.

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planned to expand the epidemiology and management data available to readers of *TB Times* and important to their daily practice. In the future this information will be made available in other formats including the website, memoranda, and special alerts.

Since next month will be the last issue, this will be the last chance for our readers to submit material they would like to have included in the *TB Times*! Please forward your contributions to Bob Miodovski, Managing Editor.

Save the Date!

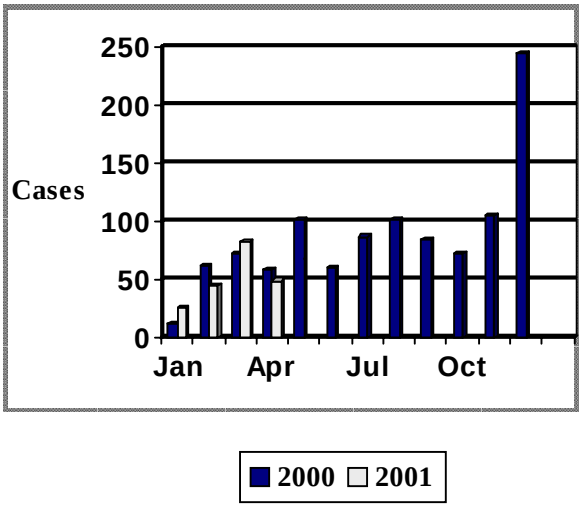
Dr. Paul T. Davidson recently announced that he will retire from the County this October. A retirement party has been scheduled for September 28, 2001 at the Quiet Cannon in Montebello, California. The cost will be $35 per person. If you would like to reserve a space, please submit a check to Flora Lamb at TB Control 2615 S. Grand Ave., Suite 507 Los Angeles, CA 90007. For more information, call Annie Luong at 213/744-6232.

Tuberculosis Cases by Health District
Los Angeles County, April 2001
(Provisional Data)

Service Area	Service Area Total Year to Date	Health District	Apr-01	Apr-00	Year to Date 2001	Year to Date 2000
SPA 1	4	Antelope Valley	2	0	4	1
SPA 2	23	East Valley	0	3	4	7
		West Valley	0	1	8	13
		Glendale	1	7	6	12
		San Fernando	1	2	5	4
SPA 3	43	El Monte	5	1	13	12
		Foothill	0	1	6	4
		Alhambra	4	3	15	15
		Pomona	2	1	9	5
SPA 4	49	Hollywood	2	5	17	14
		Central	8	5	24	18
		Northeast	3	3	8	7
SPA 5	8	West	1	3	8	7
SPA 6	27	Compton	1	4	5	10
		South	2	2	5	10
		Southeast	2	3	9	8
		Southwest	1	2	8	14
SPA 7	35	Bellflower	1	0	10	4
		San Antonio	4	5	11	12
		Whittier	2	1	5	4
		East Los Angeles	4	0	9	2
SPA 8	12	Inglewood	1	2	7	10
		Harbor	0	2	1	4
		Torrance	2	3	4	11
Unassigned	1	Unassigned	0	0	1	1
TOTAL	202		49	59	202	209

Los Angeles County Tuberculosis Incidence

By Month of Confirmation, 2000-2001



TB Times is a monthly publication providing information to those interested in TB surveillance and TB Control Program activities. Please forward your articles, comments, suggestions or address corrections to:

Tuberculosis Control Program
2615 S. Grand Avenue, Room 507
Los Angeles CA 90007
Attn: Bob Miodovski, M.P.H
Office: (213) 744-6229
Fax: (213) 749-0926
E-mail: rmiodovs@dhs.co.la.ca.us
http://www.lapublichealth.org/tb

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County of Los Angeles
Department of Health Services
Tuberculosis Control Program
2615 S. Grand Ave., Room 507

COUNTY OF LOS ANGELES
DEPARTMENT OF HEALTH SERVICES
Public Health
MARK FINUCANE
Director of Health Services
JONATHAN E. FIELDING, M.D., M.P.H.
Director of Public Health and Health Officer

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